

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number  
**WO 2004/036227 A1**

(51) International Patent Classification<sup>7</sup>: **G01N 33/94**,  
33/58, B01L 3/00

(21) International Application Number:  
PCT/EP2003/011160

(22) International Filing Date: 9 October 2003 (09.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
MI2002A002186 15 October 2002 (15.10.2002) IT

(71) Applicant (*for all designated States except US*): **SIL-**  
**MARC PHARMA S.R.L.** [IT/IT]; Via Salicchi, 893-S.  
Marco, I-55100 Lucca (IT).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **CASOLARO**, Silve-  
rio [IT/IT]; Via Salicchi, 893-S. Marco, I-55100 Lucca (IT).  
**ZAMPIERI**, Alessia [IT/IT]; Via Salicchi, 893-S. Marco,  
I-55100 Lucca (IT).

(74) Agents: **MINOJA**, Fabrizio et al.; Bianchetti Brancco Mi-  
noja S.r.l., Via Rossini, 8, I-20122 Milano (IT).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,  
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,  
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: **DIAGNOSTIC DEVICE FOR RAPID DETERMINATION OF BUPRENORPHINE**

(57) **Abstract:** This invention relates to a method of detecting buprenorphine in biological fluids (especially urine), and to a device and kit which use chromatographically mobile reagents labelled with gold clusters. The method involves contacting urine sequentially with anti- buprenorphine antibodies labelled with gold clusters and with buprenorphine immobilised on a porous support, in order to detect the presence of buprenorphine in the sample by means of a competitive reaction. The device according to the invention consists of a rack which can be filled with a number of strips; the kit consists of a box with separate sections for the strips and a separate compartment which holds the rack.

WO 2004/036227 A1